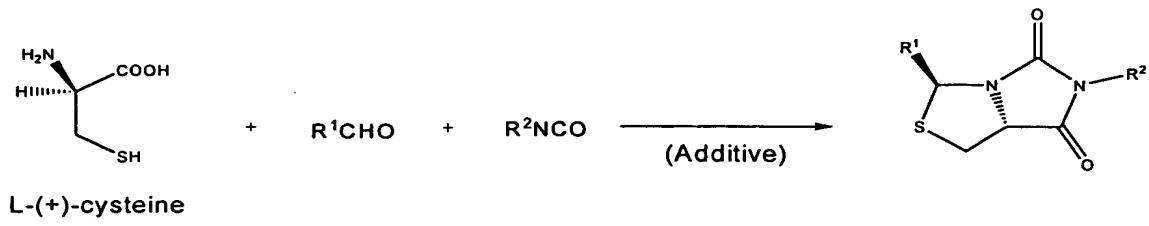


1 **WHAT IS CLAIMED IS:**

2 1. A method for synthesizing chiral bicyclic thiazolidine hydantoin,
3 the method taking L-(+)-Cysteine, an aldehyde, an isocyanate as reactants
4 with additive solid molecular sieves to synthesize chiral bicyclic thiazolidine
5 hydantoin and performing in accordance with the following chemical
6 equation:



7 1
8 wherein R¹ and R² are selected from the group comprising a hydrogen,
9 phenyl, benzyl, alkyl group containing 1 to 5 carbon atoms, aryl alkyl group
10 in which the alkyl containing 1 to 5 carbon atoms.

11 2. The method as claimed in claim 1, wherein the isocyanate is
12 benzylisocyanate.

13 3. The method as claimed in claim 2, the method comprising
14 following operational acts of:

15 mixing L-(+)-Cysteine, aldehyde, an organic alkali, an organic
16 alcohol solvent to carry out a first cycloaddition to compose a solution and to
17 generate white intermediate, wherein the organic alcohol contains 1 to 5
18 carbon atoms;

19 extracting the alcohol solvent;

20 adding the solid molecular sieves, benzylisocyanate and a ketone
21 solvent to mix well in the solution to carry out a second cycloaddition;

1 extracting the ketone solvent;

2 adding ether solvent and an inorganic acid to mix well in the solution;

3 placing the solution to separate the solution into an upper ether layer

4 and a lower aqueous layer with deposited solid molecular sieves;

5 removing the ether solvent;

6 adding an alcohol solvent to enforce crystallization of bicyclic

7 thiazolidine hydantoin in the form of a white solid, wherein the alcohol

8 contains 1 to 4 carbons;

9 extracting the alcohol solvent; and

10 drying the crystallization to obtain a final bicyclic thiazolidine

11 hydantoin.

12 4. The method as claimed in claim 3, wherein the organic alcohol

13 solvent is an organic alcohol-water solvent in a ratio of water: organic

14 alcohol=1:1.

15 5. The method as claimed in claim 3, wherein the ketone solvent

16 contains ketone having 2-5 carbons.

17 6. The method as claimed in claim 3, wherein the organic alkali is

18 sodium acetate.

19 7. The method as claimed in claim 3, wherein the organic alkali is

20 potassium acetate.

21 8. The method as claimed in claim 3, wherein the solid molecular

22 sieves are in the form of particles having 3Å -5Å bore diameters.

23 9. The method as claimed in claim 3, wherein the ether solvent is

24 diethyl ether.

1 10. The method as claimed in claim 3, wherein the reaction
2 temperature range is within 25 to 50°C.

3 11. The method as claimed in claim 2, the method comprising the
4 following operational acts of:

5 mixing L-(+)-Cysteine, an aldehyde, an organic alkali, an organic
6 alcohol solvent to carry out a first cycloaddition to compose a solution and to
7 generate white intermediate, wherein the organic alcohol contains 1 to 5
8 carbons;

9 extracting the alcohol solvent;

10 adding the solid molecular sieves, benzylisocyanate and a ketone
11 solvent to mix well in the solution to carry out a second cycloaddition;

12 extracting the ketone solvent;

13 adding ester solvent and an inorganic acid to mix well in the solution;

14 placing the solution to separate the solution into an upper ester layer
15 and a lower aqueous with deposited solid molecular sieves;

16 removing the ester solvent;

17 adding an alcohol solvent to enforce crystallization of bicyclic
18 thiazolidine hydantoin in the form of a white solid, wherein the alcohol
19 contains 1 to 4 carbons;

20 extracting the alcohol solvent; and

21 drying the crystallization to obtain a final bicyclic thiazolidine
22 hydantoin.

23 12. The method as claimed in claim 11, wherein the organic
24 alcohol solvent is an organic alcohol-water solvent in a ratio of water:

1 organic alcohol=1:1.

2 13. The method as claimed in claim 11, wherein the ketone solvent
3 contains ketone having 2-5 carbons.

4 14. The method as claimed in claim 11, wherein the organic alkali
5 is sodium acetate.

6 15. The method as claimed in claim 11, wherein the organic alkali
7 is potassium acetate.

8 16. The method as claimed in claim 11, wherein the solid
9 molecular sieves are in the form of particles having 3Å -5Å bore diameters.

10 17. The method as claimed in claim 11, wherein the ester solvent
11 is made of ester selected from the group consisting of methyl formate, ethyl
12 formate, methyl acetate, ethyl acetate, and propyl acetate.

13 18. The method as claimed in claim 11, wherein reaction
14 temperature range is within 25 to 50°C.